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Hearing Every Voice in the Room: Social Science for Public Engagement During Forest Planning

When forest planners at New Mexico's Gila National Forest began to revise their 1986 forest plan, they knew they'd have to incorporate feedback and suggestions from a variety of stakeholders. As the nation's sixth-largest national forest, the Gila encompasses a wide range of resources, including designated wilderness areas, hot springs, and a world-renowned stargazing area. These resources are all supported by passionate members of the public and other stakeholders; and the Forest Service's 2012 Planning Rule requires that planning teams provide for a transparent, collaborative process that allows effective, inclusive public participation.

How do forest planning teams ensure that every voice, or perspective or need, is not only heard but analyzed during the planning process? This is the topic of a recent Rocky Mountain Research Station General Technical Report titled, *Protocol for social vulnerability assessment to support national forest planning and management: a technical manual for engaging the public to understand ecosystem service tradeoffs and drivers of change*.

Understanding Social Vulnerability

According to Chris Armatas, the report's cowriter and a scientist with the Rocky Mountain Research Station's Aldo Leopold Wilderness Research Institute in Missoula, Montana, there's a need for understanding social vulnerability as it relates to natural resources. Social vulnerability, Armatas explains, is generally "the inability of people, organizations and societies to withstand adverse impacts from multiple stressors. Specifically, we think about how human well-being is supported by various ecosystem services, and how drivers of change might influence the provision of these services."

For a national forest, social vulnerability can relate to recreation, scenery, cultural resources, research, education, access, forest products, clean air and water, forage for grazing, production of energy and minerals, cultural and heritage resources conservation, physical and mental health, and a connection to the land. Balancing all these factors can be a tall order.

At the Gila National Forest and elsewhere, Armatas and his coworkers have implemented a public engagement protocol based on a social science information-gathering approach known as Q methodology. The well-established social science methodology provides a

During a public meeting in Las Cruces, New Mexico, Gila National Forest stakeholders complete the Q methodology protocol to help guide the forest plan revision process. (Photo: Chris Armatas, USDA Forest Service.)

structured analysis of personal opinions, and it serves as the foundation of the peer-reviewed approach developed for Forest Service use. Participants are asked to complete a process called a Q-sort, where natural resources benefits are prioritized in relation to one another. After the tradeoff activity, participants identify drivers of change—such as management actions and climate change impacts—that are most concerning to them. Information can be collected in less than an hour, participants generally find the hands-on process to be thought-provoking and fun, and the final results include an understandable and engaging representation of a diverse range of perspectives. The social science protocol is practical, and it helps forest planning teams evaluate and understand social vulnerability.

Setting a Tone for Land Management Planning

Armatas says the social science protocol addresses the need for inclusive planning, which requires interaction between planners and diverse publics, and communication of values and the ways in which people connect to nature. He adds: "The protocol can set the tone for public engagement with a structured and inclusive process. It provides an opportunity for everyone to provide input, even those who may not want to speak up in a room full of people."

During the Gila National Forest stakeholder meetings, Q methodology helped to identify four perspectives about benefits and drivers of change: environmental (biodiversity, connectivity, and water quality), utilitarian (grazing, materials for personal use, hunting/fishing, and timber production), water (quality/quantity, erosion control, and irrigation), and motorized recreation (solitude, access, recreation, and scenery). "In the case of the Gila," Armatas says, "the protocol helped to identify ecosystem service tradeoffs and areas of common ground, such as the importance of public access – this knowledge directly supported the revised planning documents."

So far, Q methodology has been used by several national forest planning groups and others have expressed interest. Armatas is also working with a collaborator to develop a web-based application so stakeholders can enter responses from home. While some basic statistical tools are required to generate analytical results, Armatas and other Forest Service statisticians can help forest planners navigate the approach. And, although some scientists and land managers may not have training or experience in public collaboration methods, the General Technical Report provides a straightforward step-by-step guide to implementing the social science protocol. Armatas explains: "We're not asking people technical questions; we're asking about how they connect with the land and the resources. Having this information shows that you've engaged with the public in a meaningful way and it can help generate valuable information for line officers in support of land management decision making."

Further Reading

Armatas, Christopher A.; Borrie, William T.; Watson, Alan E. 2019. Protocol for social vulnerability assessment to support national forest planning and management: a technical manual for engaging the public to understand ecosystem service tradeoffs and drivers of change. Gen. Tech. Rep. RMRS-GTR-396. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 52 p. https://www.fs.usda.gov/rmrs/publications/protocol-social-vulnerability-assessment-support-national-forest-planning-and

Management Implications

- The 2012 Planning Rule requires that national forest planning teams provide for a transparent, collaborative process that allows effective public participation, but there is no roadmap for how to be successful.
- A recent General Technical Report describes how Q methodology can collect stakeholder input in a way that is engaging, thorough, and scientifically rigorous.
- This process can help forest planners identify different perspectives or values, as well as areas of agreement by stakeholders.

LEAD SCIENTIST

Chris Armatas is a research social scientist, at the Aldo Leopold Wilderness Research Institute, who focuses on human-nature relationships, social-ecological systems, and processes to better integrate social science into management and planning. His profile webpage can be found at www.fs.usda.gov/rmrs/people/christopher.armatas.

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